Iron ochre containing a small quantity of arsenic. The reddish-brown powder has a peculiar disagreeable odor.

Kaolinite in the form of a pale blue, soft powder; on heating, the blue color disappears; if this substance is heated in the glass-tube, closed at one end, water is expelled which reacts alkaline; but on heating strongly, that is, to near redness, the reaction on litmus-paper indicates the presence of an acid.

Earthy geyserite containing some gypsum, and, at least, the flame-reaction of the presence of a minute quantity of potassa.

Although Mr. G. searched for chlorine or soluble chlorides, which as usual are widely distributed over the globe, in these cases, however, they seem to be absent. Whether in Sonoma County no chloride of sodium is found cannot be said at present with certainty; it is singular that none was noticed among those minerals which he had the opportunity to determine.

Cretaceous Vertebrates of the Upper Missouri.—Prof. Cope stated that he had recently returned from an exploration of the Judith River beds of the Upper Missouri, which were discovered by Dr. Hayden in 1855. Attention was given to the relation of this formation to the underlying marine cretaceous beds, and to the respective faunæ of the two as compared with that of the early eocene period. The fauna was found to be terrestrial and lacustrine, including great numbers of *Unionidæ*, *Lepidosteus*, *Myledophus* (a form probably of rays); of tailed *Batrachia*, crocodiles, fresh-water turtles, *Rhynchocephalia*, and Dinosaurian reptiles. The *Dinosauria* constitute the most abundant and characteristic form of life, eighteen species having been found, of which eight were of the carnivorous (*Goniopodous*) and ten of the herbivorous (*Orthopodous*) type. The predominant genus of the former is *Lælaps*, and of the latter *Dysganus*, of both of which several species were found.

The facies of this fauna is thus plainly mesozoic and cretaceous, adding weight to the arguments already adduced to this effect. But the change from the fauna of the underlying cretaceous numbers four and five is very striking, the genera and often higher groups being quite different. The types of the marine beds were found to be *Pythonomorpha*, *Elasmosaurus*, a genus allied to *Polycotylus*, *Enchodus*, chimærids, and sharks, with marine *Cephalopoda*, etc. Nevertheless, the physical transition between the marine and lacustrine formations appears to be complete, as indicated by Prof. Hayden.

Dr. Le Conte read the following report from the committee appointed, at the request of the Centennial Commission, to investigate and report upon the introduction of noxious insects and plants through the medium of the foreign exhibits in the exhibition:—